IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A receiver configurable to operate in either a high-throughput mode or an increased-range mode, the receiver comprising:

antenna selection circuitry to select more than one of a plurality of spatially diverse antennas to receive an orthogonal frequency division multiplexed (OFDM) symbol over one or more subchannels of a wideband channel comprising a plurality of the subchannels; ~~and~~

a plurality of fast Fourier transform (FFT) circuitries each configured to generate frequency domain symbol-modulated subcarriers for one set of OFDM subcarriers,

combining circuitry to combine corresponding frequency domain symbol-modulated subcarriers from the FFT circuitries ~~selected antennas~~ to generate combined symbol-modulated subcarriers ~~for each subchannel of the wideband channel~~,

wherein each subchannel of the wideband channel comprises a separate set ~~a plurality~~ of ~~orthogonal frequency division multiplexed~~ OFDM subcarriers, ~~and~~

~~wherein each subcarrier of an associated subchannel has a null at substantially a center frequency of other subcarriers of the associated subchannel~~

wherein in an increased-range mode when data is to be received on a single subchannel, each of the FFT circuitries is configured to generate frequency domain symbol-modulated subcarriers for the set of OFDM subcarriers associated with the single subchannel, and

wherein in a high-throughput mode when data is to be received on each subchannel of the plurality of subchannels, each of the FFT circuitries is configured to generate frequency domain symbol-modulated subcarriers for a different one of the subchannels.

2. (Cancelled)

3. (Original) The receiver of claim 1 wherein the combining circuitry comprises maximum-ratio combining circuitry to combine the corresponding frequency domain symbol-modulated subcarriers of the subchannels, and

wherein the combining circuitry comprises maximum-ratio combining circuitry to weight at least some of the frequency domain symbol-modulated subcarriers prior to combining the corresponding frequency domain symbol-modulated subcarriers substantially proportional to signal strength.

4. (Cancelled)

5. (Original) The receiver of claim 1 wherein the antenna selection circuitry it so select a first antenna of the plurality of antennas to receive the subchannels of the wideband channel,

wherein the antenna selection circuitry is to select a second antenna of the plurality of antennas to further receive the subchannels of the wideband channel, and

wherein the antenna selection circuitry is to select the first and the second antennas from the plurality based on an average signal-to-noise ratio of signals in the subchannels.

6. (Original) The receiver of claim 5 further comprising:

low-noise amplifiers to amplify radio-frequency signals of at least both subchannels;

downconversion circuitry to downconvert radio-frequency signals for each subchannel received through each antenna; and

analog-to-digital conversion circuitry to generate digital signals for each subchannel received through each antenna.

7. (Previously Presented) A receiver comprising:

antenna selection circuitry to select more than one of a plurality of spatially diverse antennas to receive an orthogonal frequency division multiplexed symbol over a wideband channel comprising a plurality of subchannels; and

combining circuitry to combine corresponding frequency domain symbol-modulated subcarriers from the selected antennas to generate combined symbol-modulated subcarriers for each subchannel of the wideband channel,

wherein parallel groups of time domain samples are to be generated from each of the subchannels received by each of the antennas,

wherein the receiver further comprises fast Fourier transform circuitry to perform fast Fourier transforms on the parallel groups of time domain samples,

wherein the fast Fourier transform circuitry comprises:

first fast Fourier transform circuitry to perform a fast Fourier transform on parallel groups of time domain samples of a first subchannel from the first antenna to generate frequency domain symbol-modulated subcarriers of the first subchannel from the first antenna;

second fast Fourier transform circuitry to perform a fast Fourier transform on parallel groups of time domain samples of a second subchannel from the first antenna to generate frequency domain symbol-modulated subcarriers of the second subchannel from the first antenna;

third fast Fourier transform circuitry to perform a fast Fourier transform on parallel groups of time domain samples of the first subchannel from the second antenna to generate frequency domain symbol-modulated subcarriers of the first subchannel from the second antenna; and

fourth fast Fourier transform circuitry to perform a fast Fourier transform on parallel groups of time domain samples of the second subchannel from the second antenna to generate frequency domain symbol-modulated subcarriers of the second subchannel from the second antenna.

8. (Original) The receiver of claim 7 wherein the combining circuitry comprises maximum ratio combining circuitry to combine, for each subcarrier of the first subchannel, the frequency domain symbol-modulated subcarriers provided by the first and third fast Fourier transform circuitry to provide combined frequency domain symbol-modulated subcarriers for the first subchannel, and

wherein the maximum-ratio combining circuitry is to combine, for each subcarrier of the second subchannel, the frequency domain symbol-modulated subcarriers provided by the second and fourth fast Fourier transform circuitry to provide combined frequency domain symbol-modulated subcarriers for the second subchannel.

9. (Currently Amended) The receiver of claim 1 further comprising:

equalizer circuitry to perform separately for each of the subchannels ~~the more than one subchannel~~, a channel equalization on the combined symbol-modulated subcarriers of an associated subchannel provided by the combining circuitry.

10. (Original) The receiver of claim 9 further comprising:

subcarrier demappers to demap, after the channel equalization, the combined symbol-modulated subcarriers of each subchannel to generate parallel groups of bits from the subcarriers; and

additional processing circuitry to generate a single decoded bit stream representing the orthogonal frequency division multiplexed symbol from the parallel groups of bits of the more than one subchannel.

11. (Original) The receiver of claim 10 wherein the subcarrier demappers are to demap the subcarriers of each subchannel in accordance with individual subcarrier modulation assignments particular to the subchannel to generate the parallel groups of bits.

12. – 27. (Cancelled)

28. (Previously Presented) A reconfigurable receiver comprising:

antenna selection circuitry to select one or more of a plurality of spatially diverse antennas to receive one or more of a plurality of subchannels; and

maximum-ratio combining circuitry to combine, when more than one antenna per subchannel is selected, corresponding symbol-modulated subcarrier of subchannels from different selected antennas,

wherein the antenna selection circuitry is to select at least one antenna of the plurality to receive either three or four subchannels when a high-throughput mode is enabled,

wherein the antenna selection circuitry is to select up to four of the antennas to receive a single subchannel when an increased-range mode is enabled, and

wherein the antenna selection circuitry is to select at least two of the antennas to simultaneously receive two of the subchannels when the increased-range and the high-throughput modes are enabled,

wherein the antenna selection circuitry is to select the antennas based on an average signal-to-noise ratio of the subchannels.

29. (Cancelled)

30. (Previously Presented) A reconfigurable receiver comprising:

antenna selection circuitry to select one or more of a plurality of spatially diverse antennas to receive one or more of a plurality of subchannels; and

maximum-ratio combining circuitry to combine, when more than one antenna per subchannel is selected, corresponding symbol-modulated subcarrier of subchannels from different selected antennas,

wherein the antenna selection circuitry is to select at least one antenna of the plurality to receive either three or four subchannels when a high-throughput mode is enabled,

wherein the antenna selection circuitry is to select up to four of the antennas to receive a single subchannel when an increased-range mode is enabled,

wherein the antenna selection circuitry is to select at least two of the antennas to simultaneously receive two of the subchannels when the increased-range and the high-throughput modes are enabled,

wherein the antenna selection circuitry is to select the antennas based on an average signal-to-noise ratio of the subchannels,

wherein the receiver comprises up to four single channel pipelines to process signals, wherein

when the high-throughput mode is enabled, each single channel pipeline is to process signals from an associated one of the either three of four subchannels,

when the increased-range mode is enabled, each single channel pipeline is to process signals of the single subchannel received by an associated one of the selected antennas, and

when the increased-range and the high-throughput modes are both enabled, a first single channel pipeline is to process signals of a first subchannel received by a first of the selected antennas, a second single channel pipeline is to process signals of a second subchannel received by the first antenna, a third single channel pipeline is to process signals of the first subchannel received by a second of the selected antennas, and a fourth single channel pipeline is to process signals of the second subchannel received by the second of the selected antennas.

31. – 33. (Cancelled)